

=> file registry
COST IN U.S. DOLLARS
FULL ESTIMATED COST

SINCE FILE ENTRY	TOTAL SESSION
0.84	1.05

FILE 'REGISTRY' ENTERED AT 12:14:05 ON 15 JUN 2004
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
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Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 14 JUN 2004 HIGHEST RN 693217-50-4
DICTIONARY FILE UPDATES: 14 JUN 2004 HIGHEST RN 693217-50-4

TSCA INFORMATION NOW CURRENT THROUGH JANUARY 6, 2004.

Please note that search-term pricing does apply when conducting SmartSELECT searches.

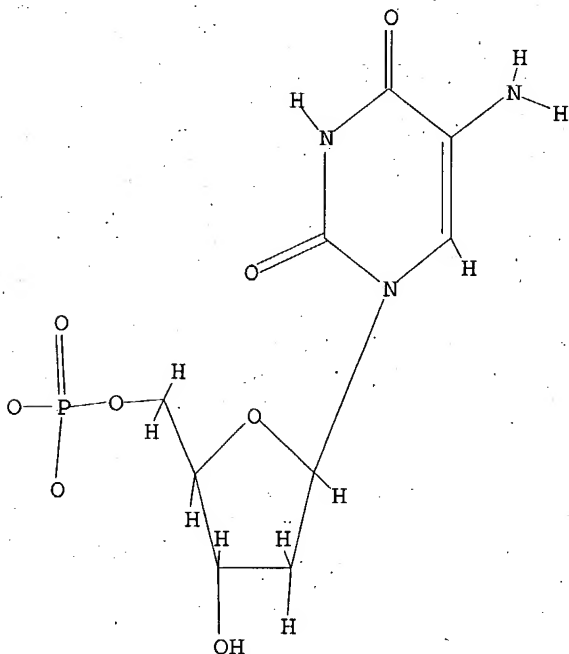
Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. For more information enter HELP PROP at an arrow prompt in the file or refer to the file summary sheet on the web at:
<http://www.cas.org/ONLINE/DBSS/registryss.html>

=>
Uploading C:\Program Files\Stnexp\Queries\10072641.str

L1 STRUCTURE UPLOADED

=> d l1
L1 HAS NO ANSWERS
L1 STR



Structure attributes must be viewed using STN Express query preparation.

=> s l1 sam

SAMPLE SEARCH INITIATED 12:14:33 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED - 19 TO ITERATE

100.0% PROCESSED 19 ITERATIONS
SEARCH TIME: 00.00.01

0 ANSWERS

FULL FILE PROJECTIONS: ONLINE **COMPLETE**
BATCH **COMPLETE**

PROJECTED ITERATIONS: 119 TO 641
PROJECTED ANSWERS: 0 TO 0

L2 0 SEA SSS SAM L1

=> s l1 full sss

FULL SEARCH INITIATED 12:15:00 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 349 TO ITERATE

100.0% PROCESSED 349 ITERATIONS
SEARCH TIME: 00.00.01

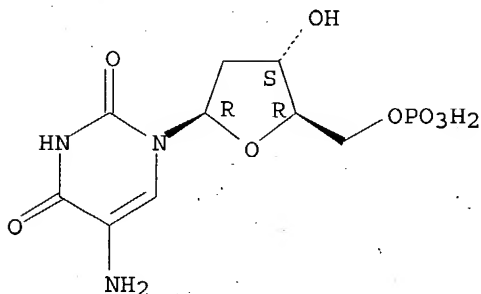
3 ANSWERS

L3 3 SEA SSS FUL L1

=> d scan str

L3 3 ANSWERS REGISTRY COPYRIGHT 2004 ACS on STN

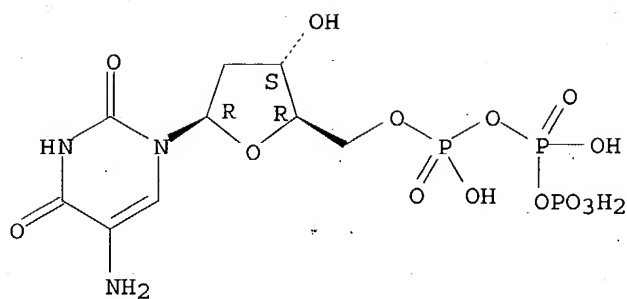
Absolute stereochemistry.



HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):2

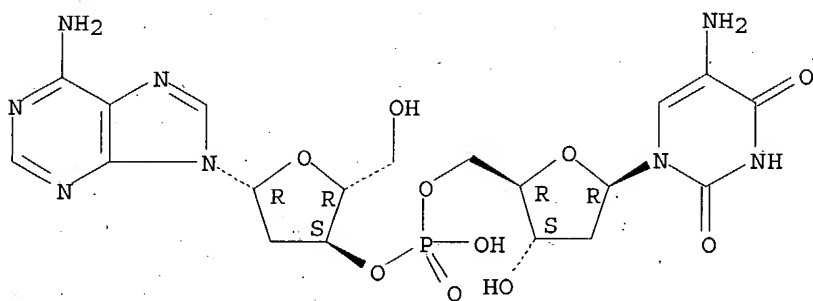
L3 3 ANSWERS REGISTRY COPYRIGHT 2004 ACS on STN

Absolute stereochemistry.



L3 3 ANSWERS REGISTRY COPYRIGHT 2004 ACS on STN

Absolute stereochemistry.



ALL ANSWERS HAVE BEEN SCANNED

=> d his

(FILE 'HOME' ENTERED AT 12:07:59 ON 15 JUN 2004)

FILE 'REGISTRY' ENTERED AT 12:08:05 ON 15 JUN 2004
E 5-AMINO-2'-DEOXYURIDINE-5'-TRIPHOSPHATE/CN

FILE 'REGISTRY' ENTERED AT 12:14:05 ON 15 JUN 2004

L1 STRUCTURE UPLOADED
L2 0 S L1 SAM
L3 3 S L1 FULL SSS

=> file caplus
COST IN U.S. DOLLARS

SINCE FILE ENTRY	TOTAL SESSION
156.26	157.31

FULL ESTIMATED COST

FILE 'CAPLUS' ENTERED AT 12:15:57 ON 15 JUN 2004
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FILE COVERS 1907 - 15 Jun 2004 VOL 140 ISS 25
FILE LAST UPDATED: 14 Jun 2004 (20040614/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> s 13
L4

9 L3

=> s 14 and composition
616552 COMPOSITION
273258 COMPOSITIONS
884631 COMPOSITION
(COMPOSITION OR COMPOSITIONS)
1282412 COMPN
513247 COMPNS
1569642 COMPN
(COMPN OR COMPNS)
2003604 COMPOSITION
(COMPOSITION OR COMPN)

L5 0 L4 AND COMPOSITION

=> d fbib abs hitstr total 14

L4 ANSWER 1 OF 9 CAPLUS COPYRIGHT 2004 ACS on STN
AN 2003:777381 CAPLUS
DN 139:273245
TI Uridine analogs and techniques for making and using
IN Verdine, Gregory L.; Storek, Michael
PA USA
SO U.S. Pat. Appl. Publ., 16 pp.
CODEN: USXXCO
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2003186930	A1	20031002	US 2002-72641	20020207
				US 2002-72641	20020207

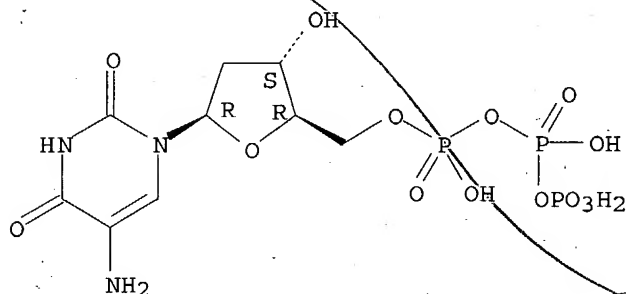
AB Uridine analogs and techniques for making and using uridine analogs are disclosed in this invention. These uridine analogs include nucleoside phosphates having a 5-aminouracil group. These nucleotides can be incorporated into a nucleic acid as an unnatural base, as a substitute for uridine or thymine. The nucleic acid can then be treated with an oxidizing agent and an alkaline solution, which causes cleavage of the nucleic acid at the position of the unnatural base. The nucleoside phosphate analogs can be used in many ways, including measuring chemical interactions between nucleic acids and other compds., or sequencing nucleic acids. Addnl. compds. can also be derivitized onto the amino group, allowing other functionalities to be added to the nucleoside phosphate, or to the nucleic acid incorporating the nucleoside phosphate.

IT 113980-89-5P
RL: SPN (Synthetic preparation); PREP (Preparation)

(uridine analogs and techniques for making and using)

RN 113980-89-5 CAPLUS
CN Uridine 5'-(tetrahydrogen triphosphate), 5-amino-2'-deoxy- (9CI) (CA
INDEX NAME)

Absolute stereochemistry.



L4 ANSWER 2 OF 9 CAPLUS COPYRIGHT 2004 ACS on STN
AN 2003:696404 CAPLUS
DN 139:208773
TI Genotyping methods for detection of single nucleotide polymorphisms using
base-modified oligonucleotides in nucleic acid amplification
IN Wolfe, Jia Liu; Kawate, Tomohiko; Allerson, Charles R.; Stanton, Vincent
P.
PA USA
SO U.S. Pat. Appl. Publ., 30 pp., Cont.-in-part of U.S. 6,566,059.
CODEN: USXXCO
DT Patent
LA English
FAN.CNT 6

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2003165880	A1	20030904	US 2002-107748	20020326
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				US 1999-394467 A2	19990910
	US 6566059	B1	20030520	US 1999-394467	19990910
				US 1998-102724PP	19981001
				US 1999-149533PP	19990817
	US 2003087398	A1	20030508	US 2002-104818	20020322
	US 6582923	B2	20030624		
				US 1998-102724PP	19981001
				US 1999-149533PP	19990817
				US 1999-394774 B3	19990910
				US 2000-709596 A3	20001109

PATENT FAMILY INFORMATION:

FAN 2000:227825

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PI	WO 2000018967	A1	20000406	WO 1999-US22988	19990930
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	DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP,				
	KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN,				
	MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM,				
	TR, TT, UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW:				
	GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE,				
	DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF,				
	CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				

US 6440705 B1 20020827

US 6566059 B1 20030520

CA 2344611 AA 20000406

EP 1117838 A1 20010725

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
IE, SI, LT, LV, FI, RO

BR 9914262 A 20020122

JP 2002525129 T2 20020813

US 6458945 B1 20021001

NO 2001001607 A 20010531

US 2003087398 A1 20030508

US 6582923 B2 20030624

US 1998-102724PP 19981001

US 1999-149533PP 19990817

US 1999-394387 A 19990910

US 1999-394457 A 19990910

US 1999-394467 A 19990910

US 1999-394774 A 19990910

US 1999-394457 19990910

US 1998-102724PP 19981001

US 1999-149533PP 19990817

US 1999-394467 19990910

US 1998-102724PP 19981001

US 1999-149533PP 19990817

CA 1999-2344611 19990930

US 1998-102724PP 19981001

US 1999-149533PP 19990817

US 1999-394387 A 19990910

US 1999-394457 A 19990910

US 1999-394467 A 19990910

US 1999-394774 A 19990910

WO 1999-US22988W 19990930

EP 1999-969748 19990930

US 1998-102724PP 19981001

US 1999-149533PP 19990817

US 1999-394387 A 19990910

US 1999-394457 A 19990910

US 1999-394467 A 19990910

US 1999-394774 A 19990910

WO 1999-US22988W 19990930

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WO 1999-US22988W 19990930

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US 1999-394387 A 19990910

US 1999-394457 A 19990910

US 1999-394467 A 19990910

US 1999-394774 A 19990910

WO 1999-US22988W 19990930

US 2000-709596 20001109

US 1998-102724PP 19981001

US 1999-149533PP 19990817

US 1999-394774 A3 19990910

NO 2001-1607 20010329

US 1998-102724PP 19981001

US 1999-149533PP 19990817

US 1999-394387 A 19990910

US 1999-394457 A 19990910

US 1999-394467 A 19990910

US 1999-394774 A 19990910

WO 1999-US22988W 19990930

US 2002-104818 20020322

US 1998-102724PP 19981001

US 1999-149533PP 19990817
US 1999-394774 B319990910
US 2000-709596 A320001109

FAN 2002:185418

PATENT NO.

KIND DATE

APPLICATION NO. DATE

PI WO 2002021098 A2 20020314
WO 2002021098 A3 20020613
WO 2002021098 B1 20020718

WO 2001-US27446 20010904

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,
GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,
LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL,
PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG,
UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY,
DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF,
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US 6500650 B1 20021231

US 2000-655104 A 20000905

US 2000-655104 20000905

US 1998-102724PP 19981001

US 1999-149533PP 19990817

US 1999-394387 A219990910

US 1999-394457 A219990910

US 1999-394467 A219990910

US 1999-394774 A219990910

AU 2001090616 A5 20020322

AU 2001-90616 20010904

US 2000-655104 A 20000905

WO 2001-US27446W 20010904

FAN 2002:794207

PATENT NO.

KIND DATE

APPLICATION NO. DATE

PI US 2002150943 A1 20021017

US 2002-107751 20020326

US 1998-102724PP 19981001

US 1999-149533PP 19990817

US 1999-394467 A219990910

US 6566059 B1 20030520

US 1999-394467 19990910

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US 2002-104818 20020322

US 6582923 B2 20030624

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US 1999-149533PP 19990817

US 1999-394774 B319990910

US 2000-709596 A320001109

FAN 2003:1235

PATENT NO.

KIND DATE

APPLICATION NO. DATE

PI US 6500650 B1 20021231

US 2000-655104 20000905

US 1998-102724PP 19981001

US 1999-149533PP 19990817

US 1999-394387 A219990910

US 1999-394457 A219990910

US 1999-394467 A219990910

US 1999-394774 A219990910

US 6440705 B1 20020827

US 1999-394457 19990910

US 1998-102724PP 19981001

US 1999-149533PP 19990817

US 6566059 B1 20030520

US 1999-394467 19990910

US 1998-102724PP 19981001

US 1999-149533PP 19990817

US 6458945 B1 20021001

US 2000-709596 20001109

US 1998-102724PP 19981001

US 1999-149533PP 19990817

US 1999-394774 A319990910

WO 2001-US27446 20010904

WO 2002021098 A2 20020314

WO 2002021098 A3 20020613

WO 2002021098 B1 20020718

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GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,
LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL,
PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG,
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US 2000-655104 A 20000905

AU 2001090616 A5 20020322

AU 2001-90616 20010904

US 2000-655104 A 20000905

WO 2001-US27446W 20010904

US 2002-104818 20020322

US 2003087398 A1 20030508

US 6582923 B2 20030624

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US 1999-394774 B319990910

US 2000-709596 A320001109

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US 1998-102724PP 19981001

US 1999-394387 B219990910

US 1999-394457 A219990910

US 1999-394467 A219990910

US 1999-394774 B219990910

US 2000-655104 A320000905

US 2003134290 A1 20030717

FAN 2003:667360

PATENT NO.

KIND DATE

APPLICATION NO. DATE

PI US 6610492 B1 20030826

US 2002-43511 20020108

US 1998-102724PP 19981001

US 1999-394467 A219990910

US 1999-394467 19990910

US 1998-102724PP 19981001

US 1999-149533PP 19990817

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US 6582923 B2 20030624

US 1998-102724PP 19981001

US 1999-149533PP 19990817

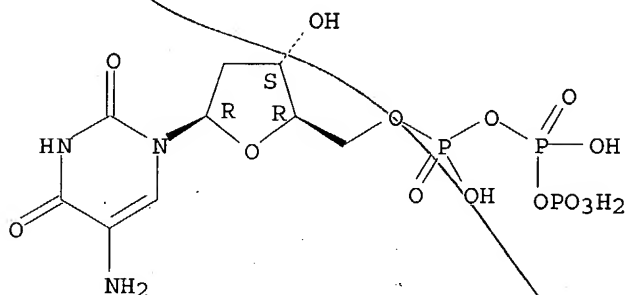
US 1999-394774 B319990910

US 2000-709596 A320001109

AB The present invention relates to a method for genotyping a diploid organism to detect single nucleotide polymorphisms (SNPs) using modified nucleotides or nucleotide residues substituted with fluorescent groups. The present invention comprises replacing a natural nucleotide with a base-modified nucleotide in a polynucleotide, and subsequently cleaving the polynucleotide with a chemical base. In this work, the bases consisted of secondary amines with high b.p.s., and included 3-pyrrolidinol, 2-pyrrolidinemethanol, 3-pyrrolidinemethanol, 4-hydroxypiperidine and 4-piperidineethanol. In the examples, this method is used in genotyping allele variations in the genes encoding the transferrin receptor and cytochrome P 4502D6. Particularly useful aspects of this method are ease of assay design, low cost of reagents and suitability of the cleavage products for detection by a variety of methods.

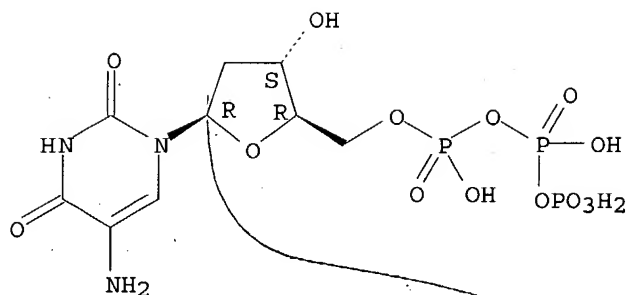
IT 113980-89-5
 RL: ARG (Analytical reagent use); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
 (genotyping methods for detection of single nucleotide polymorphisms using base-modified oligonucleotides in nucleic acid amplification)
 RN 113980-89-5 CAPLUS
 CN Uridine 5'-(tetrahydrogen triphosphate), 5-amino-2'-deoxy- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L4 ANSWER 3 OF 9 CAPLUS COPYRIGHT 2004 ACS on STN
 AN 2002:760649 CAPLUS
 DN 138:12330
 TI 5-Amino-2'-deoxyuridine, a Novel Thymidine Analogue for High-Resolution Footprinting of Protein-DNA Complexes
 AU Storek, Michael J.; Suciu, Alexandru; Verdine, Gregory L.
 CS Department of Chemistry and Chemical Biology, Harvard University, Cambridge, MA, 02138, USA
 SO Organic Letters (2002), 4(22), 3867-3869 10/31/2002
 CODEN: ORLEF7; ISSN: 1523-7060
 PB American Chemical Society
 DT Journal
 LA English
 OS CASREACT 138:12330
 AB 5-Amino-2'-deoxyuridine 5'-triphosphate, an analog of deoxythymidine triphosphate, was synthesized and found to be a substrate of Taq DNA polymerase. The DNA-borne analog underwent selective chemical reaction with permanganate. The use of 5-amino-dU as an interference probe was validated using the Ada protein/ada promoter complex. The performance of 5-amino-dU in interference footprints is similar to that of the previously described analog 5-hydroxy-dU, but the former is incorporated more readily into DNA during enzymic polymerization
 IT 113980-89-5P
 RL: BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)
 (base pair with adenine; 5-amino-2'-deoxyuridine 5'-triphosphate interferes with formation of Ada protein-DNA complex for high-resolution footprinting)
 RN 113980-89-5 CAPLUS
 CN Uridine 5'-(tetrahydrogen triphosphate), 5-amino-2'-deoxy- (9CI) (CA INDEX NAME)

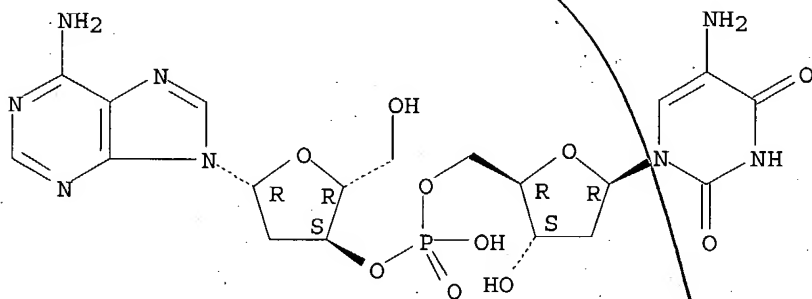
Absolute stereochemistry.



RE.CNT 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 4 OF 9 CAPLUS COPYRIGHT 2004 ACS on STN
AN 1997:591303 CAPLUS
DN 127:278403
TI Preparation of oligonucleotides containing non-natural base analogs
AU Eritja, Ramon; Adam, Viviane; Avino, Anna; Diaz, Antonio R.; Fabrega, Carme; Ferrer, Elisenda; Grotli, Morten; Guimil Garcia, Ramon; Hofmann, Mechtild; Marquez, Victor E.; Wiersma, Marten
CS European Molecular Biol. Lab., Heidelberg, D-69117, Germany
SO Nucleosides & Nucleotides (1997), 16(5 & 6), 697-702
CODEN: NUNUD5; ISSN: 0732-8311
PB Dekker
DT Journal
LA English
AB The preparation of oligonucleotides containing 5-amino-2'-deoxyuridine, 5-N-acetamido-2'-deoxyuridine, 5-aza-2'-deoxycytidine and N2-substituted guanosine derivs. is described. In each case selection of the appropriate protective group, synthesis and deprotection conditions is discussed.
IT 194412-17-4P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of oligodeoxyribonucleotides containing non-natural base analogs)
RN 194412-17-4 CAPLUS
CN Uridine, 2'-deoxyadenylyl-(3'→5')-5-amino-2'-deoxy- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

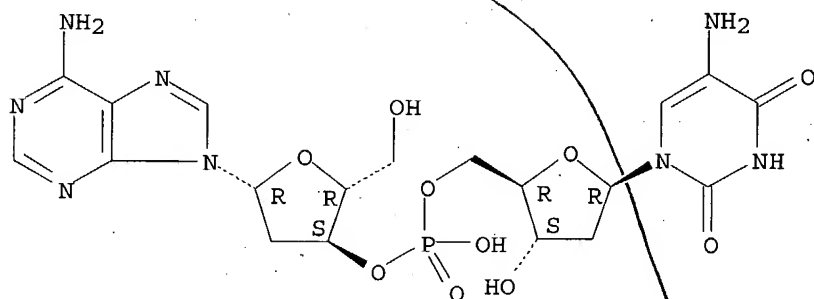


RE.CNT 14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 5 OF 9 CAPLUS COPYRIGHT 2004 ACS on STN
AN 1997:520073 CAPLUS

DN 127:205808
 TI Synthesis of oligodeoxynucleotides containing 5-aminouracil and its N-acetyl derivative
 AU Ferrer, Elisenda; Neubauer, Gitte; Mann, Matthias; Eritja, Ramon
 CS European Molecular Biology Laboratory, Heidelberg, D-69117, Germany
 SO Journal of the Chemical Society, Perkin Transactions 1: Organic and Bio-Organic Chemistry (1997), (14), 2051-2057
 CODEN: JCPRB4; ISSN: 0300-922X
 PB Royal Society of Chemistry
 DT Journal
 LA English
 AB The preparation of oligonucleotides containing 5-amino-2'-deoxyuridine is described. Three different protective groups for the amino function of 5-aminouracil including trifluoroacetyl, dimethylformamidine and 2-(4-nitrophenyl)ethoxycarbonyl are analyzed in order to reduce the acetylation of this base observed during the assembly of oligonucleotides containing this base analog. The side-reaction is avoided by using the base-labile 2-(4-nitrophenyl)ethoxy as protecting group and 2-(4-nitrophenyl)ethyl chloroformate during the capping step.
 IT 194412-17-4P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation of aminouracil-containing oligodeoxyribonucleotides)
 RN 194412-17-4 CAPLUS
 CN Uridine, 2'-deoxyadenylyl-(3'→5')-5-amino-2'-deoxy- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RE.CNT 32 THERE ARE 32 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 6 OF 9 CAPLUS COPYRIGHT 2004 ACS on STN
 AN 1988:164220 CAPLUS
 DN 108:164220
 TI Nonradioactive labeling of synthetic oligonucleotide probes with terminal deoxynucleotidyl transferase
 AU Kumar, Abhay; Tchen, Paul; Roulet, Françoise; Cohen, Jean
 CS Stn. Rech. Virol. Immunol., INRA, Thiverval-Grignon, F-78850, Fr.
 SO Analytical Biochemistry (1988), 169(2), 376-82
 CODEN: ANBCA2; ISSN: 0003-2697
 DT Journal
 LA English
 AB Synthetic oligonucleotides were tailed at the 3' end using terminal deoxynucleotidyl transferase. Nucleotide triphosphates with free primary amines at the end of side chains were compared for their tailing efficiency and/or detection sensitivity, using biotin-11-dUTP as a reference. Free primary amines were tagged with activated biotin or fluorescein isothiocyanate. The probes were then detected with either

INIDS

streptavidin-alkaline phosphatase complex or anti-fluorescein antibodies and alkaline phosphatase-conjugated secondary antibodies. Tailing conditions were optimized and the probes were tested for detection of Escherichia coli ST1a enterotoxin DNA and rotavirus RNA.

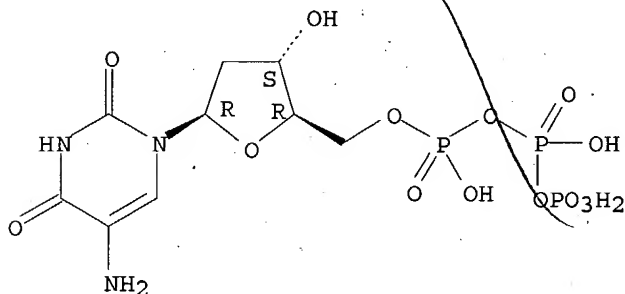
IT 113980-89-5

RL: ANST (Analytical study)
(oligonucleotide labeling by terminal deoxynucleotidyl transferase with)

RN 113980-89-5 CAPLUS

CN Uridine 5'-(tetrahydrogen triphosphate), 5-amino-2'-deoxy- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L4 ANSWER 7 OF 9 CAPLUS COPYRIGHT 2004 ACS on STN

AN 1987:515932 CAPLUS

DN 107:115932

TI 5-Azidodeoxyuridine compounds

IN Haley, Boyd E.; Evans, Robert K.

PA University of Wyoming, USA

SO PCT Int. Appl., 25 pp.

CODEN: PIXXD2

DT Patent

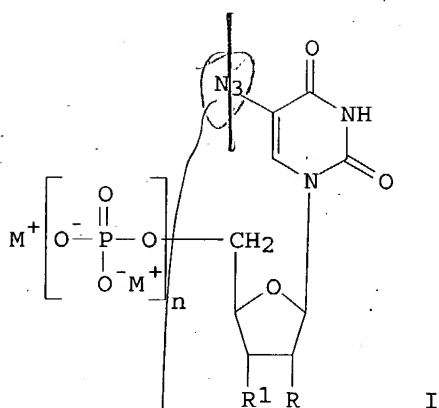
LA English

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 8606253	A1	19861106	WO 1986-US854	19860422
W: JP				
RW: AT, BE, CH, DE, FR, GB, IT, LU, NL, SE				
US 4672111	A	19870609	US 1985-726145	19850423
EP 218701	A1	19870422	US 1985-726145	19850423
EP 218701	B1	19930804	EP 1986-902752	19860422
R: CH, DE, FR, GB, LI, SE				
CA 1266643	A1	19900313	US 1985-726145	19850423
			CA 1986-507355	19860423
			US 1985-726145	19850423

OS CASREACT 107:115932

GI



AB The title nucleosides and nucleotides [I; R = H, OH; R1 = (PO42-)m, H, OH; n = 1-5; m = 1-3; M+ = mono- or divalent cation], useful for preparation of photoactive DNA in photoaffinity labeling of DNA, were prepared. Thus, treatment of 2'-deoxyuridine 5'-monophosphate with NOBF4 and Zn reduction of the resulting 5-nitro-2'-deoxyuridine 5'-monophosphate gave 5-amino-2'-deoxyuridine 5'-monophosphate which was diazotized by NaNO2 in 1N HCl and treated with NaN3 to give 5-azido-2'-deoxyuridine 5'-monophosphate. This was activated with (PhO)2P(O)Cl in DMF and treated with tetrabutylammonium pyrophosphate to give 5-azido-2'-deoxyuridine 5'-triphosphate which was a good substrate of DNA polymerase (no data) to produce photoactive DNA.

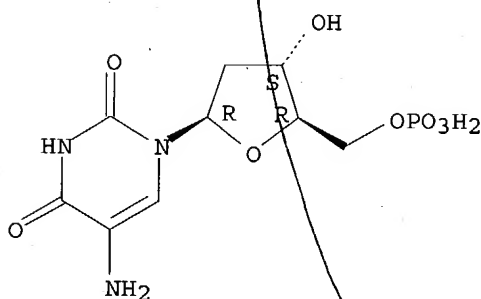
IT 4603-58-1P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and diazotization of)

RN 4603-58-1 CAPLUS

CN 5'-Uridylic acid, 5-amino-2'-deoxy- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L4 ANSWER 8 OF 9 CAPLUS COPYRIGHT 2004 ACS on STN

AN 1987:46270 CAPLUS

DN 106:46270

TI Synthesis and biological properties of 5-azido-2'-deoxyuridine 5'-triphosphate, a photoactive nucleotide suitable for making light-sensitive DNA

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SO Biochemistry (1987), 26(1), 269-76

CODEN: BICHAW; ISSN: 0006-2960

on IPS

DT Journal
LA English
AB A photoactive nucleotide analog of dUTP, 5-azido-2'-deoxyuridine 5'-triphosphate (5-N3dUTP), was synthesized from dUMP in 5 steps. The key reaction in the synthesis of 5-N3dUTP is the nitration of dUMP in 98% yield in 5 min at 25° by an excess of nitrosonium tetrafluoroborate in anhydrous DMF. Reduction of the resulting 5-nitro compound with Zn and 20

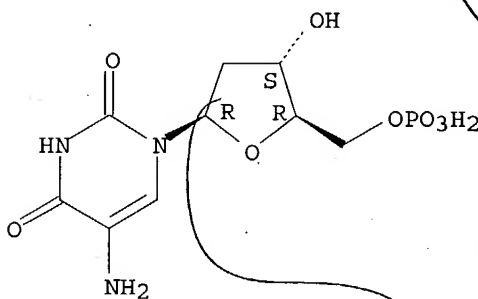
mM HCl gave 5-aminodeoxyuridine monophosphate (5-NH2dUMP). Diazotization of 5-NH2dUMP with HNO2 followed by the addition of NaN3 to the acidic diazonium salt solution gave a photoactive nucleotide derivative in 80-90% yield. The monophosphate product was identified as 5-N3dUMP by proton NMR, UV, IR, and chromatog. anal. as well as by the mode of synthesis and by its photosensitivity. After formation of 5-N3dUTP through a chemical coupling of pyrophosphate to 5-N3dUMP, the triphosphate form of the nucleotide was found to support DNA synthesis by Escherichia coli DNA polymerase I at a rate indistinguishable from that supported by dTTP. When UMP was used as the starting compound, 5-aminouridine triphosphate (5-N3UTP) was prepared in an analogous fashion with similar yields and produced a photoactive nucleotide which is a substrate for E. coli RNA polymerase. To prepare [γ -32P]5-N3dUTP for use as an active-site-directed photoaffinity labeling reagent, a simple method of preparing γ -32P-labeled pyrimidine nucleotides was developed. [γ -32P]5-N3dUTP is an effective photoaffinity labeling reagent for DNA polymerase I; it bound to the active site with a 2-fold higher affinity than dTTP. The photoactivity of 5-N3dUMP is stable to extremes of pH, and [γ -32P]5-N3dUTP is an effective photolabeling reagent even in the presence of 10 mM dithiothreitol. 5-Azidouracil-containing nucleotides have potential applications as active-site-directed photoaffinity labeling reagents and as tools for generating photoactive DNA and RNA to study nucleic acid-binding proteins.

IT 4603-58-1P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and diazotization of)

RN 4603-58-1 CAPLUS

CN 5'-Uridylic acid, 5-amino-2'-deoxy- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



on IDS

L4 ANSWER 9 OF 9 CAPLUS COPYRIGHT 2004 ACS on STN

AN 1986:622031 CAPLUS

DN 105:222031

TI 5-Azido-2'-deoxyuridine 5'-triphosphate: a photoaffinity-labeling reagent and tool for the enzymic synthesis of photoactive DNA

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SO Proceedings of the National Academy of Sciences of the United States of America (1986), 83(15), 5382-6
CODEN: PNASA6; ISSN: 0027-8424

DT Journal

LA English

AB The photoactive deoxyuridine nucleotide 5-azido-2'-deoxyuridine 5'-triphosphate (5-N3dUTP) was prepared and used it to synthesize light-sensitive DNA by enzymic incorporation. In the absence of UV light, 5-N3dUTP is a substrate for Escherichia coli DNA polymerase I. In in vitro DNA synthesis reactions using bacteriophage M13 single-stranded DNA as the template and 5-N3dUTP in place of dTTP, a photoactive complementary strand was not synthesized when the 5-N3dUTP was substituted for dCTP or when it was exposed to UV light prior to the addition of DNA polymerase I. Using a synthetic lac operator template of 26 bases and a 15-base primer, we generated a photoactive 26-base-pair lac operator by enzymically incorporating 5-N3dUMP with DNA polymerase I. Crosslinking of this photoactive DNA fragment to lac repressor was totally dependent on the presence of UV light and was reduced 78% by 150 μ M iso-Pr β -D-thiogalactoside. Under the same conditions no crosslinking to lac repressor was observed using a nonphotoactive 26-base-pair lac operator. Photoactivable deoxyuridine analogs have potential application as reagents to crosslink DNA binding proteins to 5-azidouracil-containing DNA and as active-site-directed photoaffinity labeling reagents.

IT 4603-58-1

RL: ANST (Analytical study)
(azotization of)

RN 4603-58-1 CAPLUS

CN 5'-Uridylic acid, 5-amino-2'-deoxy- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

